

REMARKS/ARGUMENTS

Claims 1-21 are currently pending in the present application. Claim 18 has been objected to as allegedly having indefinite language. The Examiner has objected to the abstract of the disclosure due to the inclusion of a docket number in the footer of the abstract page. The Examiner has also objected to the specification because it allegedly fails to include adequate disclosure of the subject matter disclosed in claim 9. The Examiner has also objected to the drawings. Claims 2, 9, 10, 13, 16, 17 and 19 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Claims 1-8, 10-15 and 18-21 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,097,722 to Graham et al. Applicants respectfully traverse the rejections.

Objection to Drawings

Applicants have amended the drawings and the specification to illustrate the interfaces of a routing system. The specification at paragraph [0035] has been amended to add reference numbers (97) to the interfaces of a routing system based on the changes to Figure 2A. No new matter has been added.

Objection to Claim 18

Applicants have amended claim 18 in a manner that overcomes the Examiner's object and, therefore, respectfully request removal of the objection.

Objection to Abstract

Applicants resubmit the abstract without amendment because it complies with

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the applicable regulations. The docket number reference "6533/53778" appears in the footer of the page below the page number. It is beyond question that it is not part of the abstract of the disclosure. Accordingly, Applicants respectfully request that the Examiner reconsider the objection.

Objection to Specification

Applicants have amended claim 9 to clarify what is meant by "conditioning." This step is explained in the specification at paragraph [0055], which discloses how the newly computed virtual bandwidth limit is compared to the currently configured virtual bandwidth limit. This specification also explains that the newly computed virtual bandwidth limit may be used if the change from the currently configured limit is less than a threshold amount. In light of the foregoing, Applicants respectfully request withdrawal of the instant objection.

Rejection under 35 U.S.C. § 112, second paragraph

Applicants have amended claims 2, 9, 10, 13, 16, 17 and 19 to address the Examiner's remarks. For example, applicant has amended the claims to clarify what is meant by the phrase "applying a virtual bandwidth limit."

Prior Art Rejection

Applicants have amended claim 1 to state:

1. A method facilitating bandwidth management across a plurality of access links, comprising
 - monitoring bandwidth utilization at a plurality of interfaces in at least one routing system, wherein the plurality of interfaces are operably connected to respective access links;
 - selecting an interface of the plurality of interfaces having the highest bandwidth utilization relative to a corresponding bandwidth capacity of the selected interface;
 - computing a scaling factor comprising the ratio of the bandwidth capacity to the bandwidth utilization of the selected interface; and
 - computing a virtual bandwidth limit by multiplying the scaling factor by the aggregate bandwidth utilization detected across the plurality

of interfaces.

The remaining independent claims have been amended to include similar limitations. Paragraphs [0047] & [0048] provide support for the foregoing amendments. As disclosed in the specification, a scaling factor, based on the observed bandwidth utilization at the most proportionally loaded interface, is used to compute a virtual bandwidth limit to prevent the load at the interfaces associated with a virtual access link from becoming overloaded.

Graham fails to disclose or suggest the claimed subject matter. Graham discloses a system that adjusts the size of virtual paths in a virtual private network in response to call requests for bandwidth reservations. See Graham, Col. 9, lines 25-33. Graham does not disclose a system that enforces a virtual bandwidth limit that is computed to prevent an interface of a group of interfaces that make up a virtual access link from becoming overloaded. Specifically, Graham discloses methods and systems for management bandwidth reservations in virtual private networks implemented by ATM switches. See Graham, Col. 3, lines 11-39; see also Col. 6, line 38 – Col. 7, line 5. The system includes a centralized control module and a plurality of ATM switches. See Graham, Figure 1A; Col. 5, line 66 – Col. 6, line 13. Bandwidth manager module 150 operates in connection with call admission module 140 and monitor module 145 to control the size of bandwidth reservations corresponding to virtual paths in the network 170. Graham, Col. 6, lines 14-37; see also Col. 7, lines 6-47 (describing how call admission control monitor determines virtual paths and channels for a request, and instructions bandwidth manager 150 to adjust the size of the virtual paths). Graham does not disclose, however, the monitoring of bandwidth utilization, and the computation of a scaling factor as disclosed and claimed. Furthermore, Graham does

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not teach a system that computes a virtual bandwidth limit by multiplying the scaling factor and the aggregate observed bandwidth utilization across a plurality of interfaces associated with a virtual access link.

In light of the foregoing, Applicant believes that all currently pending claims are presently in condition for allowance. Applicant respectfully requests a timely Notice of Allowance be issued in this case. If the Examiner believes that any further action by Applicant is necessary to place this application in condition for allowance, Applicants request a telephone conference with the undersigned at the telephone number set forth below.

Date: June 21, 2007

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Respectfully Submitted,
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